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### What knowledge exists in NSW schools of students with learning difficulties who are also academically gifted?

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## What knowledge exists in NSW schools of students with learning difficulties who are also academically gifted?

### Abstract

Little or no empirical research on students who are gifted with learning difficulties has been conducted in Australia. This research investigated the knowledge teachers in New South Wales, Australia had of these students. A mixed methods approach was adopted involving surveys and interviews of teachers from primary and secondary schools across all education sectors. The study focussed on two issues: the teachers' knowledge of, and attitudes towards these students; and, the educational programs they implemented for these students. Demographics from the survey highlighted the lack of post-graduate training by teachers in both gifted education and learning difficulties. The findings showed that schools are not able to identify these students and are not meeting their specific educational needs. The evidence suggested that schools exhibited inconsistent knowledge about these students, and demonstrated a lack of understanding of how these students are affected by what the teachers do in the classroom.

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# What knowledge exists in NSW schools of students with learning difficulties who are also academically gifted?

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## **Abstract**

Little or no empirical research on students who are gifted with learning difficulties has been conducted in Australia. This research investigated the knowledge teachers in New South Wales, Australia had of these students. A mixed methods approach was adopted involving surveys and interviews of teachers from primary and secondary schools across all education sectors. The study focussed on two issues: the teachers' knowledge of, and attitudes towards these students; and, the educational programs they implemented for these students. Demographics from the survey highlighted the lack of post-graduate training by teachers in both gifted education and learning difficulties. The findings showed that schools are not able to identify these students and are not meeting their specific educational needs. The evidence suggested that schools exhibited inconsistent knowledge about these students, and demonstrated a lack of understanding of how these students are affected by what the teachers do in the classroom.

## **Introduction**

Gifted education in Australia has made considerable progress but there exists a subgroup of gifted students who have been overlooked. Students who are both gifted and have a learning difficulty present a paradox to the education community. These students are often not identified in either category as their giftedness may mask the difficulty and/or the student may be achieving at an appropriate grade for age level. On the other hand the student's difficulty may be identified rather than the giftedness (Little, 2001).

## **Gifted students with a learning disability**

One of the possible reasons for the lack of recognition of this population by teachers is the difficulty in defining it. Many definitions exist for both giftedness and learning difficulties but each is defined by the educational professionals involved with the individual groups. Professionals working with each group have failed to agree on

a universal definition that recognises students who are gifted with a learning difficulty.

Defining these students would require elements from the definitions of both a gifted student, and a student with learning difficulties. This would mean that a gifted student who has a learning difficulty may be defined as a student with natural abilities in the intellectual, creative, socio affective or sensorimotor domains (Gagné's Differentiated Model of Giftedness and Talent [DMGT]), and yet at the same time have impairment in processes that are related to learning, thinking, remembering, or perceiving. Baum, Owen and Dixon (1991) identified three subgroups of these students. The first group are students identified as gifted who have subtle learning difficulties, which become apparent as the level of work undertaken at school increases in difficulty. The second group are those who are not identified as gifted or having a learning difficulty, as they are achieving at a grade level. The third group are the students who are identified for their learning difficulty and are often placed in remedial programs and their giftedness not recognised.

The characteristics of these students has been well documented and researched (Barton & Starnes, 1989; Baum & Owen, 1988; Brody & Mills, 1997; Hishinuma & Tadaki, 1998; Munro, 2002). Case study research has shown that they demonstrated many of the characteristics of their gifted peers, but they were also recognised as a heterogeneous group with their own unique characteristics (Barton & Starnes, 1989; Baum, Emerick, & Herman, 1989; Yewchuk, 1983). Over a period of time, education in the field of giftedness with learning difficulties has received increased attention in the area of developing and providing appropriate educational programming for these students (Baum, 1988; Bees, 1998; Hishinuma & Nishimura, 2000; Shevitz, Weinfeld, Jeweler, & Barnes-Robinson, 2003; Weinfeld, Barnes-Robinson, Jeweler, & Shevita, 2002), in addition to integration and teaching strategies (Baum, Cooper & Neu, 2001; Bisland, 2004). Successful programs for these students are programs that recognise a student's giftedness while at the same time recognising that they have learning difficulties and providing assistance in the development of strategies to

overcome their learning difficulties (Barton & Starnes, 1989; Baum & Owen, 1988; Baum, Cooper & Neu, 2001; Bisland, 2004; Brody & Mills, 1997; Hishinuma & Tadaki, 1998; Munro, 2002).

## Method

A mixed methods approach was used in this research in order to gain greater insight and understanding of teachers' and school counsellors' knowledge of, and attitudes to students who are gifted with learning difficulties. Teachers and school counsellors were surveyed and subsequently interviewed. Teachers and school counsellors were surveyed using the Survey of Practices with Students of Varying Needs (SOP). Following analysis of the surveys a small number of teachers were interviewed.

### *Participants*

Staff at eleven schools participated in the research. The schools were selected from schools within a metropolitan New South Wales Department of Education and Training (NSW DET) School Education Area and included selective high schools, a primary school with opportunity classes in addition to mainstream classes, comprehensive high schools and mainstream primary schools. Students in selective high schools and opportunity classes have been identified as gifted and have gained entry through a combination of testing and school grades. Comprehensive high schools and mainstream primary schools from Sydney's Catholic Education Office (CEO) and one independent Kindergarten to Year 12 school also participated in the research. A total of 131 completed surveys were received.

Eight teachers and school counsellors were interviewed after collection of the surveys. The interviewees represented a cross-section of teachers across all education systems, representing primary and secondary schools, selective schools and a gender balance.

### *Instrument*

The Survey of Practices with Students of Varying Needs (SOP) was used to assess teachers' knowledge of and attitude to students who are gifted and have learning difficulties (Tomlinson, Callahan, Moon, Tomchin, Landrum, Imbeau, Hunsaker, & Eiss, 1995). It also provided an indication of teachers' confidence at meeting these students' educational needs and the different strategies they could implement in order to do so.

The SOP consisted of four parts. Part 1 addressed the knowledge and attitudes of teachers towards gifted learners and struggling learners. In Part II of the SOP, teachers were asked to reflect and rank from one to three the amount of time and attention they gave to the groups of average, learning disabled and gifted students respectively.

Part III asked respondents to rate on a scale ranging from no confidence to very confident, their ability to:

- adapt their lessons to meet the needs of gifted and remedial learners;
- accommodate varying levels of ability in their class;
- assess where students were and designing appropriate lessons;
- individualise instruction to meet the needs of gifted and remedial learners; and,
- identify gifted and remedial students.

In Part IV, respondents were asked to nominate which of 14 specific techniques, activities or instructional strategies they thought they would use in the classroom with average, gifted and special education students.

### *Analysis*

For the demographics, the frequencies and percentages of participants' responses were calculated for the variables of: age, whether the school had provisions for gifted students or learning difficulties students, whether the respondent had responsibility for gifted students or students with learning difficulties, and whether formal study had been completed by the teacher in gifted or special education. Data for gifted and learning difficulties provisions, responsibility for gifted or students with learning difficulties and formal study in the field of gifted or special education were separated into two groups: one including, and another excluding, selective high schools.

Each of the four parts of the survey was analysed separately. A gifted subscale and a learning difficulties subscale were formed from the 35 items in Part I. Means and standard deviations for each item in the two sub-scales were calculated. A two-way between groups analysis of variance was conducted to explore the impact, if any, that the age of the teachers and their work environment – selective high schools versus mainstream schools – had on teachers' and school counsellors' knowledge of, and attitudes to gifted students and students with learning difficulties. A one-way ANOVA was conducted to compare the gifted sub-scale scores for teachers who had formal training in gifted education and teachers who had no formal

training in gifted education. Similarly a one-way ANOVA was conducted to compare the effect of having formal training in learning difficulties. Percentage ranking were calculated for Part II of the survey, means and standard deviations for Part III and percentages and rankings for Part IV.

## Results

One subject in gifted education had been studied at the undergraduate level by 9.2% of teachers. This is in direct contrast to undergraduate study in learning difficulties, where 20.6% of teachers had studied a subject related to learning difficulties in their undergraduate degree. Two teachers had undertaken a gifted subject, and one teacher a learning disabilities subject in their Master of Special Education degree. The majority of teachers including those from selective high schools had no formal training in either gifted education or learning difficulties. When excluding selective high school data, the full time provision in mainstream and comprehensive schools for gifted students was half that for students with learning difficulties. In mainstream and comprehensive schools the main provision for gifted students was part time provision, enrichment, and extension work or withdrawal programs.

Teachers were asked to indicate whether they held a position of responsibility for gifted or learning disabled students. When eliminating selective high school responses the most common response was that the participants had no responsibility for gifted or learning difficulties students.

A greater number of teachers when including selective high school data had no training in gifted education than when selective high schools data were excluded. This pattern also held true for qualifications in learning difficulties. Additionally, a greater percentage of non-selective high school teachers have post-graduate qualifications or additional training in gifted education. Teachers teaching in a specialist high school for gifted students had fewer qualifications than those who were not teaching in a selective high school. This is a real concern as the expectation would be that as selective high schools are specialist schools educating students who have been identified as gifted, the teachers should have a greater rate of training in gifted education.

A one-way ANOVA was conducted to compare the gifted scale scores for teachers who had formal training in gifted education and teachers who had no formal training in gifted education.

There was a significant difference in scores for teachers who had formal training in gifted education as compared to teachers who had no formal training in gifted education ( $F=8.150$ ,  $p < .005$ ). Similarly a one-way ANOVA was conducted to compare the effect of formal training in learning difficulties. No significant effect was found for teachers who were trained in learning difficulties.

The data demonstrated that a greater percentage of schools do not have full time gifted provisions but rather provide for these students on a part time basis and by implementing enrichment, extension and withdrawal programs. Additionally when selective high school data were excluded most schools did not have a person responsible for either gifted provisions or learning difficulties. From Part 1 of the SOP, a gifted learner's and a struggling learner's subscale were formed. These subscales assessed knowledge and attitudes of teachers and school counsellors towards students who were gifted or had learning difficulties. Analysis of results showed that teachers' knowledge of, and attitudes to, gifted learners were positive and demonstrated that they had some awareness of gifted education. In contrast teachers' attitudes to struggling learners were ambivalent.

In Part II of the SOP, teachers were asked to rank from one to three the amount of time and attention they gave to the groups of students with learning difficulties, average and gifted students, with one being the greatest amount of time and attention, and three the least amount of time. Teachers responded in the following ways:

- 39.4% ranked average students as number one;
- 32.8% ranked students with learning difficulties as number one;
- 8.6% ranked gifted as number one; and,
- 22.9% stated they spent an equal amount of time with each group.

These results demonstrated that the greatest percentage of teachers is teaching to the middle and lower levels of the class. Excluding selective high school data decreased the percentage of teachers who ranked gifted students at number one and increased the number who ranked them at number three.

In Part III, response options ranged from 1 (no confidence) to 5 (most confident). Teachers' responses indicated that they felt some confidence about accommodating various levels of ability, assessing where students were at, designing appropriate lessons, identifying

remedial learners and adapting lessons to meet the needs of gifted learners. For the remaining items, teachers did not express strong feelings either way. These results conflicted with the results for Part 1 of the survey. Teachers had a positive attitude towards gifted students yet they did not feel confident at individualising instruction or even identifying gifted students. Teachers' ranking of confidence levels with respect to remedial learners is in line with their ambivalent attitude towards these students, except with respect to identifying them, with which they have indicated some confidence. These results represented substantial conflict, with teachers noting that they accommodated various levels of students in their classroom, yet they were not confident in individualising instruction for gifted and remedial students.

In Part IV, respondents were asked to nominate which of 14 specific techniques, activities or instructional strategies they would consider using in the classroom with gifted, average and students with learning difficulties. The three most common strategies teachers reported that they would consider using for gifted students were higher level thinking practices (65.7%), independent study (61.9%) and curriculum compacting (46.3%). Two of these strategies were also ranked in the three most common strategies that teachers would consider using with average students, that is, higher level thinking practices (42.8%) and independent studies (30.6%). The third most common strategy considered for average students was drill and practice (40.5%). Drill and practice (49.7%) was the number one strategy that teachers would consider for students with learning difficulties. Individual instruction (25.2%) and workbook exercises (10.7%) were the additional common strategies that teachers would consider using with students with learning difficulties.

The strategies of independent study, interdisciplinary activities, problem solving activities and projects are strategies which teachers would not consider using with students with learning difficulties. Whilst other listed strategies ranked low as possibilities for use with gifted and average students, there was not a single strategy that they would not consider using at all.

It is interesting to note that some of the activities teachers considered appropriate for gifted students were not considered for students with learning difficulties or were considered by only a few teachers. Rogers (2002) suggested that there are strategies appropriate for all students, including gifted students. These may include drill and practice, higher order thinking practices, individual projects, curriculum

compacting, individual instruction and problem solving activities. Drill and practice was ranked number one for students with learning difficulties, but 14<sup>th</sup> for gifted students with only 4.6% of teachers considering this strategy for gifted students. Despite ability grouping being ranked 4<sup>th</sup> for students with learning difficulties, only 8.4% considered it, yet 31.2% of teachers ranked it 5<sup>th</sup> for gifted students. This strategy would be appropriate for all students, and would provide opportunity for like-minded students to work together cooperatively – a strategy ranked 9<sup>th</sup> (16%) and 5<sup>th</sup> (20.6%) respectively for gifted and average students and 7<sup>th</sup> (3.8%) for students with learning difficulties.

## Discussion

Identification of students who are gifted with a learning difficulty as demonstrated by this research is possibly not occurring in schools, not because the teachers are unwilling or unsupportive of the concept, but rather because they do not have the ability, knowledge and support to do so. They were interested to learn more in order to provide appropriate educational experiences for this group of students and felt that with the support and cooperation of the staff involved that this could be achieved. Some of the data obtained from the surveys in addition to data from the interviews confirmed that teachers can identify gifted students and that they are aware of the classroom strategies that are relevant for these students. This was demonstrated by the positive attitudes teachers had towards gifted students and their ability to articulate the characteristics of gifted students. The teachers interviewed were also able to discuss various appropriate classroom strategies such as open-ended tasks and curriculum differentiation.

Data demonstrated substantial confusion, however, with teachers noting that they have knowledge of gifted education, yet do not rate themselves as confident at identifying gifted students and providing appropriate lessons and instruction. The survey data, as well as interview data, also indicated that teachers are aware of the appropriate strategies and activities for these students yet when asked to provide specific examples of tasks or programming for gifted students they were unable to do so.

A contradiction was also established with respect to students with learning difficulties. The survey data demonstrated that teachers had some confidence in identifying these students but interviewing showed that this was probably because the teachers considered that the students were being identified prior to attending

class. Additionally the interviewees did not feel it was their responsibility to meet these students' needs in the classroom. This was demonstrated through their inability to provide examples of specific difficulties that they would recognise in their classrooms and strategies for these students that they would implement in their classes.

These issues highlighted that identifying students who are gifted with a learning difficulty in the school system is unlikely to occur, particularly when there is a definite and visible divide between students with learning difficulties and students who are gifted. This was highlighted by not only the different attitudes of the teachers as demonstrated through analysis of the surveys, but also the contradictions provided through survey data analysis and analysis of teacher interviews. Substantial, appropriate and comprehensive training is needed in order to overcome these deficits.

In order to provide an educational program that is appropriate for these students, teachers need to have sound knowledge and understanding of the special educational needs of this population of students. Through an understanding of these students, teachers will have an awareness of whether the strategies that they are using in the classroom are appropriate. If the strategies are not appropriate, teachers will need to learn what is required in order to be able to implement the correct strategies and activities for diverse learners. The contradictions, conflicts and confusion that have been demonstrated throughout the research highlighted that many teachers do not have the ability to effectively meet the needs of these diverse learners.

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